

## CLAIMS

What is claimed is:

1. A method in a data processing system for sequencing of business objects in preparation for parallel processing in application integration, said method comprising the steps of:

receiving a plurality of business objects, wherein each business object is associated with an application;

allocating each business object to a data set of a plurality of data sets associated with the business object such that the data set contains all business objects associated with the application; and

partitioning the data sets into a plurality of groups such that each group contains one or more data sets, wherein there are less groups than there are data sets.

2. The method according to claim 1, wherein the plurality of business objects are received at an interface to a business integration application.

3. The method according to claim 1, wherein the step of allocating includes the step of performing a hash algorithm on an application number associated with a business object.

4. The method according to claim 1, wherein the step of partitioning includes the step of performing a modulo reduction transformation on each data set.

5. The method according to claim 4, wherein the modulo reduction transformation is represented as:

$$i = \text{abs}(k_j) \text{ modulo } n$$

where,  $i$  is the integer event queue number, and  $i=0, 1, 2, \dots (n-1)$ ;  
 $k_j$  is the application number or primary key that identifies the data set, and  $j=0, 1, 2, \dots (m-1)$ ;  
 $m$  is an integer number identifying the number of unique data sets; and  
 $n$  is an integer number identifying the number of event queues.

6. The method according to claim 1, further comprising the step of storing each group of the plurality of groups in a separate one of a plurality of event queues.
7. The method according to claim 6, wherein the number of groups is equal to a number of event queues of the plurality of event queues.
8. The method according to claim 1, further comprising the step of processing business objects contained within the same event queue of the plurality of event queues in series and business objects contained in different event queues of the plurality of event queues in parallel.

9. A data processing system for sequencing of business objects in preparation for parallel processing in application integration comprising:

an event partitioner receiving a plurality of business objects, wherein each business object of the plurality of business objects is associated with an application, and allocating each business object of the plurality of business objects to a data set of a plurality of data sets associated with the business object such that the data set contains all business objects of the plurality of business objects associated with the application, and partitioning the plurality of data sets into a plurality of groups such that each group of the plurality of groups contains one or more data sets of the plurality of data sets, wherein a number of groups of the plurality of groups is less than a number of data sets of the plurality of data sets.

10. The data processing system according to claim 9, wherein the event partitioner is an interface to a business integration application.

11. The data processing system according to claim 9, wherein the event partitioner includes means for performing a hash algorithm on an application number associated with a business object.

12. The data processing system according to claim 9, wherein the event partitioner includes means for performing a modulo reduction transformation on each data set.

13. The data processing system according to claim 12, wherein the modulo reduction transformation is represented as:

$$i = \text{abs}(k_j) \text{ modulo } n$$

where,  $i$  is the integer event queue number, and  $i=0, 1, 2, \dots (n-1)$ ;

$k_j$  is the application number or primary key that identifies the data set, and  $j=0, 1, 2, \dots (m-1)$ ;

m is an integer number identifying the number of unique data sets; and

n is an integer number identifying the number of event queues.

14. The data processing system according to claim 9, further comprising a plurality of event queues, and wherein the event partitioner directs the event queues of the plurality of event queues to store each group of the plurality of groups in a separate one of the plurality of event queues.

15. The data processing system according to claim 14, wherein a number of event queues of the plurality of event queues is equal to the number of groups.

16. The data processing system according to claim 14, further comprising a processor that receives the plurality of business objects from the plurality of event queues and processes business objects contained within the same event queue of the plurality of event queues in series and business objects contained in different event queues of the plurality of event queues in parallel.

17. An article of manufacture comprising machine-readable medium including program logic embedded therein that causes control circuitry in a data processing system for sequencing of business objects in preparation for parallel processing in application integration to perform the steps of:

receiving a plurality of business objects, wherein each business object of the plurality of business objects is associated with an application;

allocating each business object of the plurality of business objects to a data set of a plurality of data sets associated with the business object such that the data set contains all business objects of the plurality of business objects associated with the application; and

partitioning the plurality of data sets into a plurality of groups such that each group of the plurality of groups contains one or more data sets of the plurality of data sets, wherein a number of groups of the plurality of groups is less than a number of data sets of the plurality of data sets.

18. The article of manufacture of Claim 17, wherein the plurality of business objects are received at an interface to a business integration application.

19. The article of manufacture of Claim 17, wherein the step of allocating includes the step of performing a hash algorithm on an application number associated with a business object.

20. The article of manufacture of Claim 17, wherein the step of partitioning includes the step of performing a modulo reduction transformation on each data set.

21. The article of manufacture of Claim 20, wherein the modulo reduction transformation is represented as:

$$i = \text{abs}(k_j) \text{ modulo } n$$

where,  $i$  is the integer event queue number, and  $i=0, 1, 2, \dots (n-1)$ ;  
 $k_j$  is the application number or primary key that identifies the data set, and  $j=0, 1, 2, \dots (m-1)$ ;  
 $m$  is an integer number identifying the number of unique data sets; and  
 $n$  is an integer number identifying the number of event queues.

22. The article of manufacture of Claim 17, further comprising the step of storing each group of the plurality of groups in a separate one of a plurality of event queues.

23. The article of manufacture of Claim 22, wherein the number of groups is equal to a number of event queues of the plurality of event queues.

24. The article of manufacture of Claim 17, further comprising the step of processing business objects contained within the same event queue of the plurality of event queues in series and business objects contained in different event queues of the plurality of event queues in parallel.